

Two new species of the genus *Pelecopsis* Simon (*bucephala* group) from Spain and Morocco (Araneae, Linyphiidae)

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Introduction

The genus *Exechophysis* Simon 1884 was synonymised with *Pelecopsis* Simon 1864 by Millidge (1977) and listed with 41 other genera in the "*Pelecopsis*" group of the family Linyphiidae. The species formerly included in *Exechophysis* now comprise the *bucephala* species group (type *Pelecopsis bucephala* (O.P.-C.)). The group occurs in the Mediterranean region from Italy and Tunisia westwards, with the majority of species in North Africa. The present paper adds two new species to the group making a total of eight and increasing to three the number known from Europe.

The *bucephala* species group, as with the former genus *Exechophysis*, is distinguished by a combination of features which, individually, can be found elsewhere in *Pelecopsis*. Both sexes have a well-defined dorsal scutum and clearly punctate striae radiating from the fovea. The sternum is relatively less wide between the fourth coxae than in other species of *Pelecopsis*. The posterior eyes of the female are less strongly procurved and the male has a lateral spine (or row of spines) on the ectal side of the palpal tibia in addition to the tibial apophysis. In other species of *Pelecopsis* a scutum is present in the male but usually absent or vestigial in the female. Exceptions include *P. coccinea* (O.P.-C) and *P. radicola* (L. Koch) both of which show a scutum in the female as well as in the male.

Pelecopsis bicornuta n.sp. (Figs. 1, 5, 8, 11, 14, 15, 18)

Male

Total length: 2.35 mm. *Cephalothorax:* Length 1.03 mm, width 0.76 mm. Orange-brown, suffused

with some black in cephalic region. Short sulci run back from lateral eyes and punctate striae radiate from fovea (Figs. 1, 5). *Chelicerae:* With clear stridulatory ridges and three anterior teeth. *Abdomen:* Grey with a glossy brown punctate scutum. *Sternum:* Orange-brown, suffused with black towards edges and furnished with longish hairs. Width of sternum between fourth coxae rather less than diameter of coxa. *Legs:* Pale orange-brown. Relative lengths IV/I/II/III. Spination very little developed. Trichobothria on metatarsi I-III 0.55-0.58, absent on leg IV. *Palp:* Two apophyses on patella which is swollen (Fig. 8).

Female

Total length: 2.85 mm. *Cephalothorax:* Length 1.05 mm, width 0.82 mm. Orange-brown, punctate striae radiate from fovea. Clypeus 4x diameter of AM eye (Fig. 15). *Eyes:* Viewed from above, posteriors 1 diameter apart, AM 0.5 d. apart and 0.75 d. from AL, laterals contiguous. *Chelicerae:* With weak stridulatory ridges and three relatively strong anterior teeth (Fig. 15). *Abdomen:* Fig. 14. *Sternum:* As ♂. *Legs:* As ♂ but dorsal spine present in basal half of each tibia. *Epigyne:* Fig. 11. *Vulva:* Fig. 18.

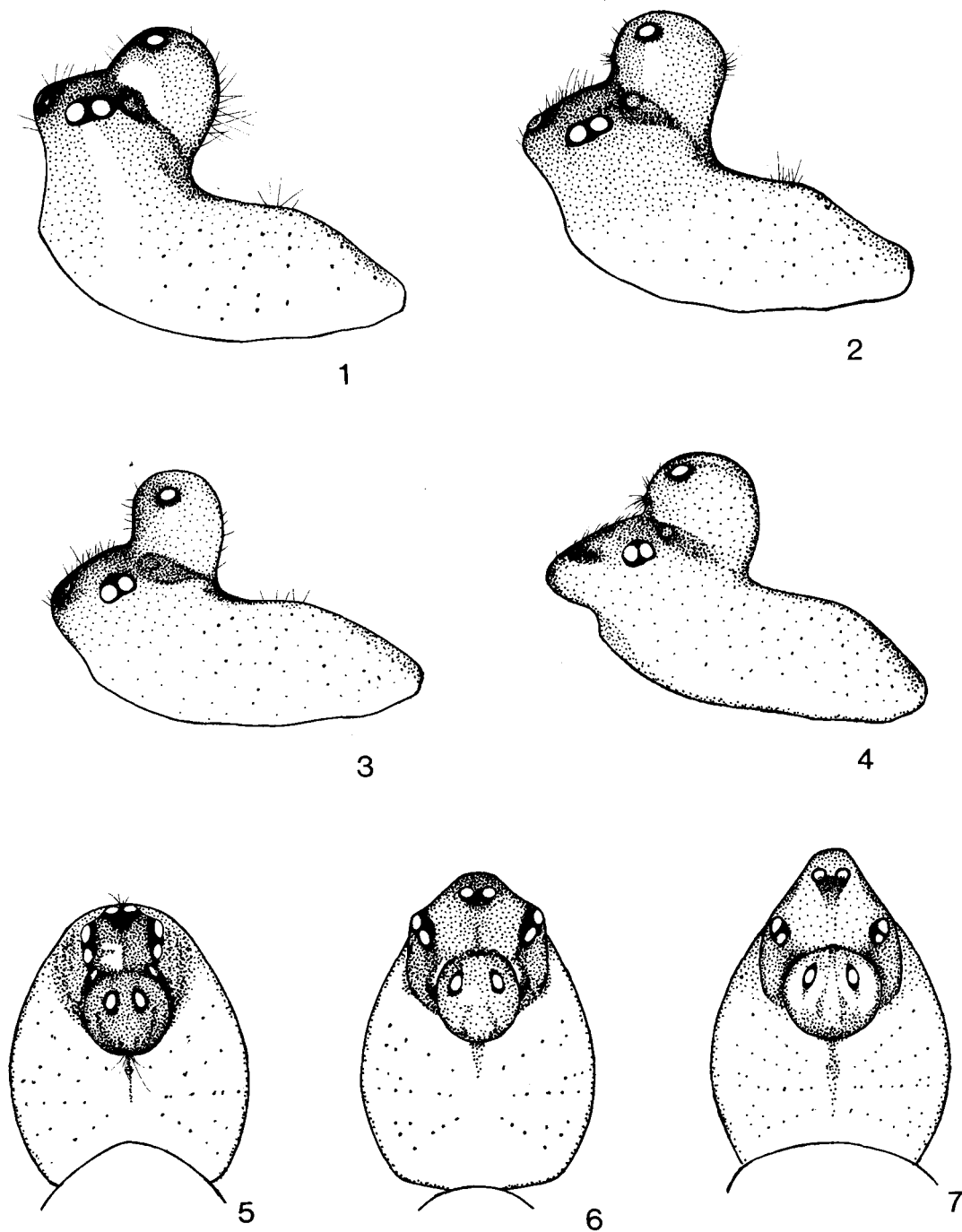
Variation: No significant differences found in examples from Spain and Morocco.

Material: ♂ holotype (B.M.reg.no. 1979.10.31.1) from rough grazing (base of tall grass stems) near Facinas, Prov. Cadiz, Spain, 36°8' N., 5°40' W., leg. P.D.H. 19 May 1978. Two ♂ paratypes from roadside bank, Ojen, Prov. Cadiz, Spain, 36°8' N., 5°36' W., leg. J. & F. Murphy 17 April 1974. Two ♀ paratypes (B.M.reg.no. 1979.10.31.2-3) collected with holotype. One ♂ and one ♀ paratype (B.M.reg.no. 1979.10.31.4-5) amongst sandstone rocks, near Sources de l'Oum er Rbia at 1500 m, Middle Atlas, Morocco, 33°10' N., 5°30' W., leg. P.D.H. 10 May 1977.

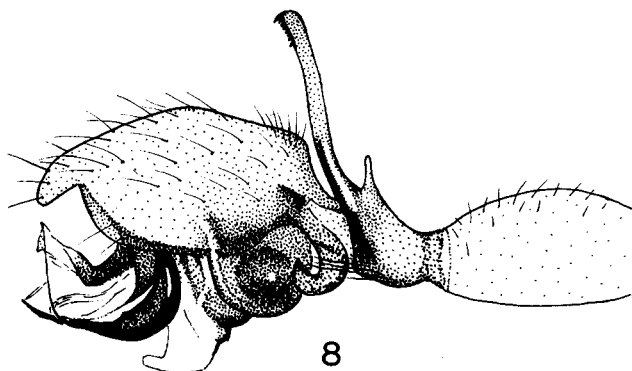
Pelecopsis modica n.sp. (Figs. 2, 3, 6, 9, 12, 16)

Male

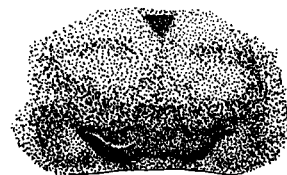
Total length: 2.45 mm. *Cephalothorax:* Length 1.15 mm, width 0.80 mm. Orange-yellow, suffused with black in cephalic region. Short sulci run back from lateral eyes and punctate striae radiate from fovea (Figs. 2, 6). *Chelicerae:* With weak stridulatory ridges and three anterior teeth. *Abdomen:* Grey with



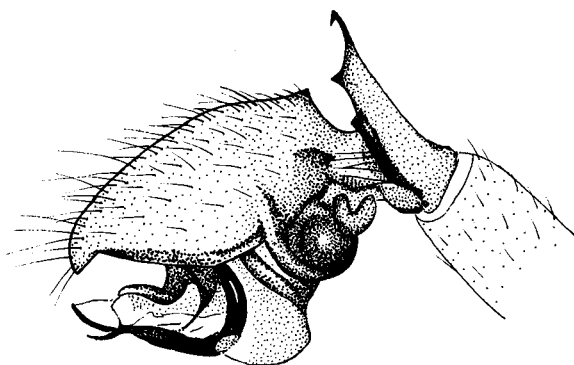
Figs. 1-7: *Pelecopsis bicornuta* n.sp. 1 ♂ cephalothorax, lateral; 5 idem, dorsal.
Pelecopsis modica n.sp. 2 ♂ cephalothorax, lateral (Spain); 3 idem (Morocco); 6 idem, dorsal (Spain).
Pelecopsis bucephala (O.P.-C.). 4 ♂ cephalothorax, lateral; 7 idem, dorsal.



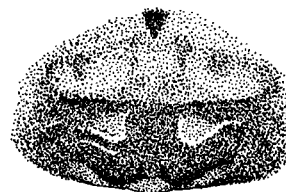
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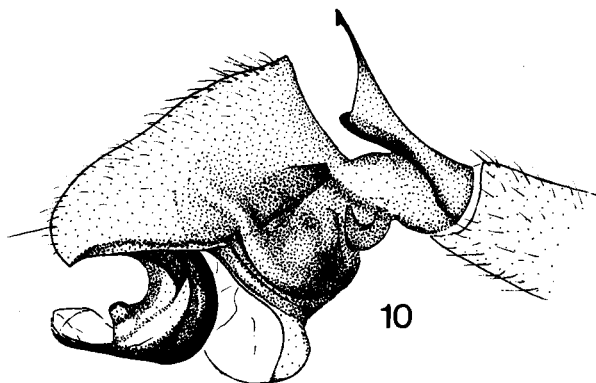
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10



13

Figs. 8-13: *Pelecopsis bicornuta* n.sp. 8 left palp, lateral; 11 epigyne.
Pelecopsis modica n.sp. 9 left palp, lateral; 12 epigyne.
Pelecopsis bucephala (O.P.-C.). 10 left palp, lateral; 13 epigyne.

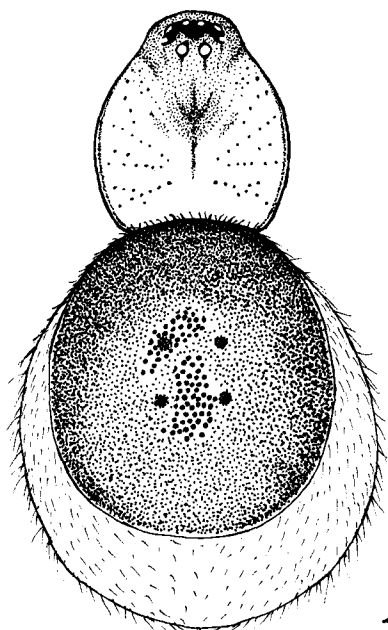
a glossy brown punctate scutum. *Sternum*: Yellow, suffused with black towards edges and furnished with longish hairs. Width of sternum between fourth coxae less than diameter of coxa. *Legs*: White. Relative lengths IV/I/II/III. Spination very little developed. Trichobothria on metatarsi I-III 0.58-0.60, absent on leg IV. *Palp*: One short tibial apophysis (Fig. 9).

Female

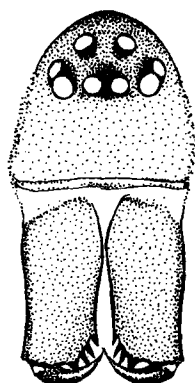
Total length: 2.60 mm. *Cephalothorax*: Length 1.12 mm, width 0.86 mm. Pale orange, punctate

striae radiate from fovea. Clypeus 3x diameter of AM eye (Fig. 16). *Eyes*: Viewed from above, posteriors one diameter apart, AM 0.3 d. apart and 0.5 d. from AL, laterals contiguous. *Chelicerae*: With fine stridulatory ridges and three relatively weak anterior teeth (Fig. 16). *Abdomen*: Similar to ♂. *Sternum*: As ♂. *Legs*: As ♂ but dorsal spine present in basal half of each tibia. *Epigyne*: Fig. 12. *Vulva*: Not figured, insufficient material.

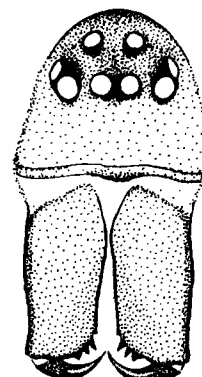
Variation: Cephalic region of male from Morocco (Fig. 3) differently shaped in comparison with specimen from Spain (Fig. 2).



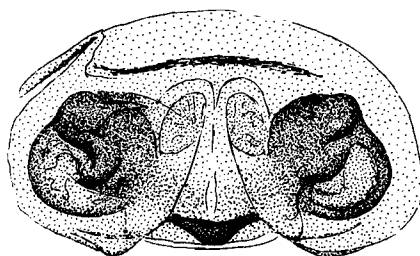
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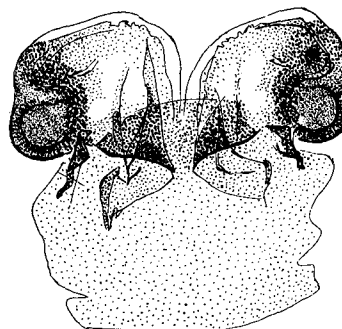
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16



17



18

Figs. 14:-18: *Pelecopsis bicornuta* n.sp. 14 ♀ dorsal; 15 idem, facies and chelicerae; 18 vulva. *Pelecopsis modica* n.sp. 16 ♀ facies and chelicerae. *Pelecopsis bucephala* (O.P.-C.). 17 vulva.

Species	Position of AM eyes	Palpal patella	Palpal apophysis
<i>bucephala</i> (O.P.-C.) (Europe and N. Africa)	Well forward in extension of cephalothorax	Normal (not swollen)	Moderate, one tooth
<i>uncinata</i> (Denis) (N. Africa)	As above	Normal	Moderate, two teeth
<i>modica</i> n.sp. (Europe and N. Africa)	Not well forward	Normal	Short, one tooth
<i>suilla</i> (Simon) (N. Africa)	Not well forward	Normal	Moderate, without teeth
<i>leonina</i> (Simon) (N. Africa)	Not well forward	Swollen	Long, three teeth
<i>bicornuta</i> n.sp. (Europe and N. Africa)	Not well forward	Swollen	Two apophyses, one (distal) long
<i>hipporegia</i> (Denis) (N. Africa)	Not well forward	Normal	Two apophyses

Table 1: Tabular key to males of the *bucephala* species group.

Material: ♂ holotype (B.M.reg.no. 1979.10.31.6) from under stone in cork oak woodland on northern slopes of Sierra de Luna at 400 m, Prov. Cadiz, Spain, 36°9' N., 5°34' W., leg. P.D.H. 20 May 1978. One ♀ paratype (B.M.reg.no. 1979.10.31.7) collected with holotype. One ♂ paratype (B.M.reg.no. 1979.10.31.8) from under stone in holly oak woodland at 1050 m, central Morocco near Oulmes, 33°30' N., 5°45' W., leg. P.D.H. 5 May 1979.

Observations

Figures of the well-known species *P. bucephala* (Figs. 4, 7, 10, 13, 17) are included here to allow comparison of all three European species. Examination of the male palp shows the form of the tegulum, subtegulum, suprattegulum and embolus to be closely similar in each species. By contrast, the cymbium, tibia, tibial apophysis and cephalic region in the male are quite distinct in *P. bicornuta* n.sp. This species is closest to *P. leonina* (Simon) from Algeria in that both possess a noticeably swollen palpal patella and a long tibial apophysis with distal serrations.

A simple tabular key (Table 1), based on three generalised characters in the male, is presented to illustrate some of the relationships in the species group as a whole (*P. semitecta* (Denis) known only

from the female is omitted). Good figures of the previously known species are provided by Denis (1964, 1967a, b).

Acknowledgements

I am indebted to Dr A. F. Millidge for advice and specimens of *P. bucephala*. I am also grateful to Mr E. Taylor (Hope Department, Oxford) for the loan of type material, and to Mr and Mrs J. Murphy for the loan of additional paratypes.

References

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